

Electrak® LA14

12, 24 and 36 Vdc - load up to 6800 N



Standard Features and Benefits

- Rugged and robust
- Withstands very harsh environments
- Stainless steel extension tube
- Corrosion free aluminium cover tube
- Acme or ball screw drive
- Trunnion mounting possible
- Overload clutch for mid and end of stroke protection
- T-slot grooves in the cover tube for magnetic sensors
- Motor with thermal switch
- Maintenance free

General Specifications

Parameter	Electrak LA14
Screw type	acme or ball
Internally restrained	yes
Manual override	no, optional
Dynamic braking	no
Holding brake acme screw models ball screw models	no, self-locking yes
End of stroke protection	overload clutch
Mid stroke protection	overload clutch
Motor protection	auto reset thermal switch
Motor connection	flying leads and connector
Motor connector	AMP connector with housing p/n 180908-5 with male terminals p/n 42098-2
Certificates	CE
Options	• potentiometer • manual override

» Ordering Key - see page 77

» Glossary - see page 85

» Electric Wiring Diagram - see page 56

Performance Specifications

Parameter		Electrak LA14
Maximum load, dynamic / static	[N]	
DA •• -05A65M (acme screw)		1100 / 11350
DA •• -10A65M (acme screw)		2250 / 11350
DA •• -20A65M (acme screw)		2250 / 11350
DA •• -05B65M (ball screw)		2250 / 18000
DA •• -10B65M (ball screw)		4500 / 18000
DA •• -20B65M (ball screw)		4500 / 18000
DA •• -21B65M (ball screw)		6800 / 18000
Speed, at no load / at maximum load	[mm/s]	
DA •• -05A65M (acme screw)		54 / 32
DA •• -10A65M (acme screw)		30 / 18
DA •• -20A65M (acme screw)		15 / 12
DA •• -05B65M (ball screw)		61 / 37
DA •• -10B65M (ball screw)		30 / 19
DA •• -20B65M (ball screw)		15 / 12
DA •• -21B65M (ball screw)		15 / 11
Available input voltages	[Vdc]	12, 24, 36 *
Standard stroke lengths	[mm]	50, 100, 150, 200, 250, 300, 350, 400, 450, 500, 550, 600
Operating temperature limits	[°C]	-25 – +65
Full load duty cycle @ 25 °C	[%]	25
End play, maximum	[mm]	1,0
Restraining torque	[Nm]	0
Lead cross section	[mm ²]	2
Lead length	[mm]	165
Protection class		IP65

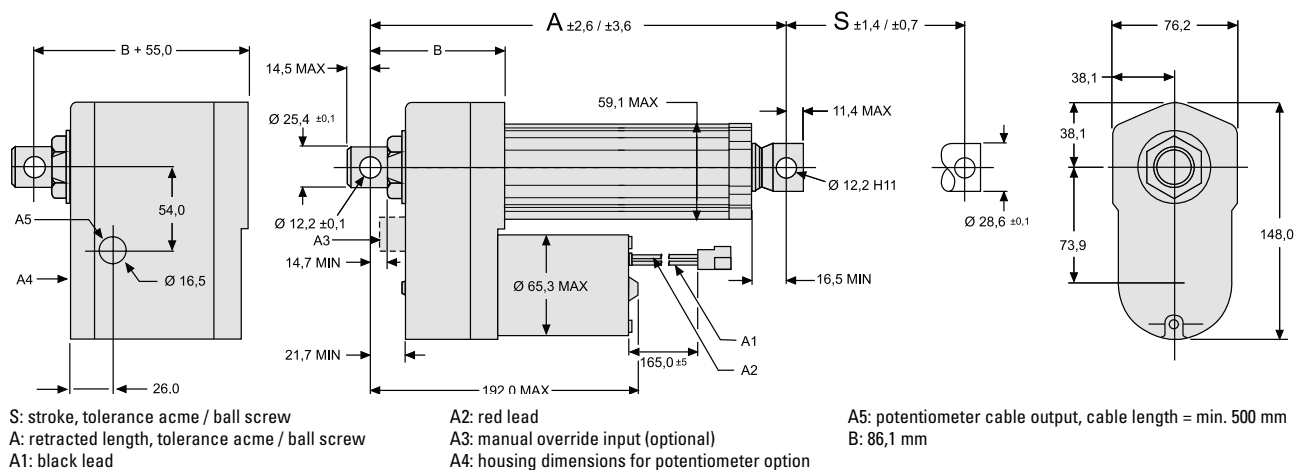
* Other input voltages available on request, contact customer support.

Compatible Controls

Control model	See page
DPDT switch	61
AC-063	62

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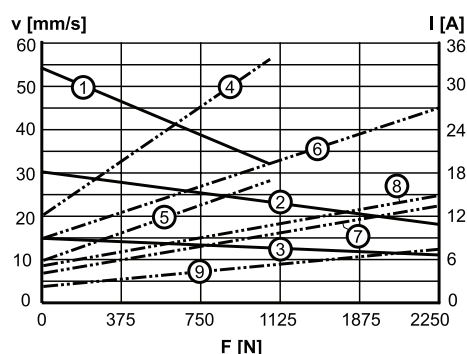


Stroke (S)	[mm]	50	100	150	200	250	300	350	400	450	500	550	600
Retracted length, acme screw models (A)	[mm]	216,7	266,7	316,7	366,7	416,7	466,7	566,7	616,7	666,7	716,7	766,7	816,7
Retracted length, ball screw models (A)	[mm]	269,6	319,6	369,6	419,6	469,6	519,6	619,6	669,6	719,6	769,6	819,6	869,6
Add on length for potentiometer*	[mm]	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0	55,0
Weight, acme screw models	[kg]	4,5	4,7	4,9	5,1	5,3	5,5	5,8	6,0	6,2	6,4	6,6	6,8
Weight, ball screw models	[kg]	5,3	5,5	5,7	5,9	6,1	6,3	6,6	6,8	7,0	7,2	7,4	7,6
Add on weight for potentiometer*	[kg]	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3	1,3
Potentiometer resistance change*	[ohm/mm]	39	39	39	39	39	20	20	20	20	20	10	10

* Potentiometer is optional

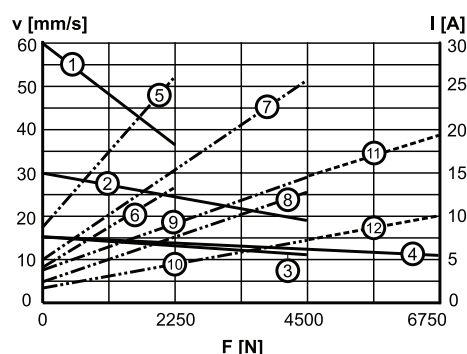
Performance Diagrams

Acme Screw Models
Speed and Current vs. Load



- V: speed
- I: current
- F: load
- 1: speed DA •• -05A65M
- 2: speed DA •• -10A65M
- 3: speed DA •• -20A65M
- 4: current 12 Vdc, DA12-05A65M
- 5: current 24 Vdc, DA24-05A65M
- 6: current 12 Vdc, DA12-10A65M
- 7: current 24 Vdc, DA24-10A65M
- 8: current 12 Vdc, DA12-20A65M
- 9: current 24 Vdc, DA24-20A65M

Ball Screw Models
Speed and Current vs. Load

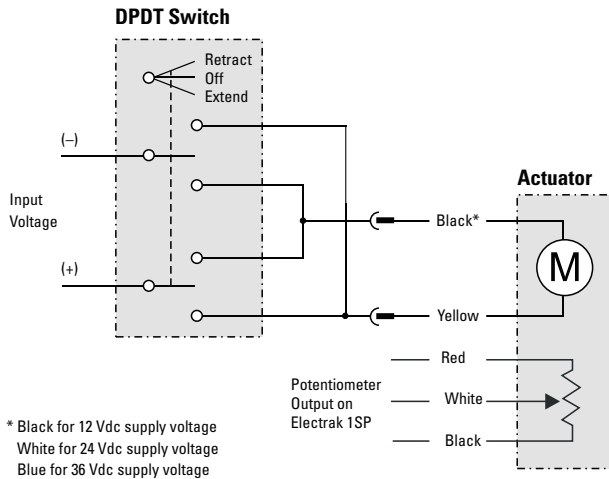


- V: speed
- I: current
- F: load
- 1: speed DA •• -05B65M
- 2: speed DA •• -10B65M
- 3: speed DA •• -20B65M
- 4: speed DA •• -21B65M
- 5: current 12 Vdc, DA12-05B65M
- 6: current 24 Vdc, DA24-05B65M
- 7: current 12 Vdc, DA12-10B65M
- 8: current 24 Vdc, DA24-10B65M
- 9: current 12 Vdc, DA12-20B65M
- 10: current 24 Vdc, DA24-20B65M
- 11: current 12 Vdc, DA12-21B65M
- 12: current 24 Vdc, DA24-21B65M

Electrical Wiring Diagrams

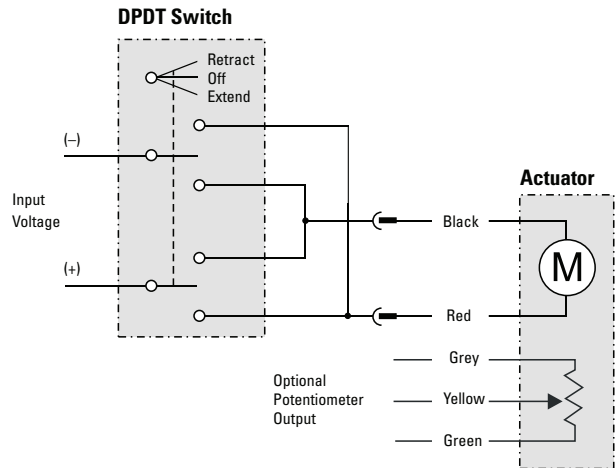
DC-actuators

Electrak 1 and 1SP



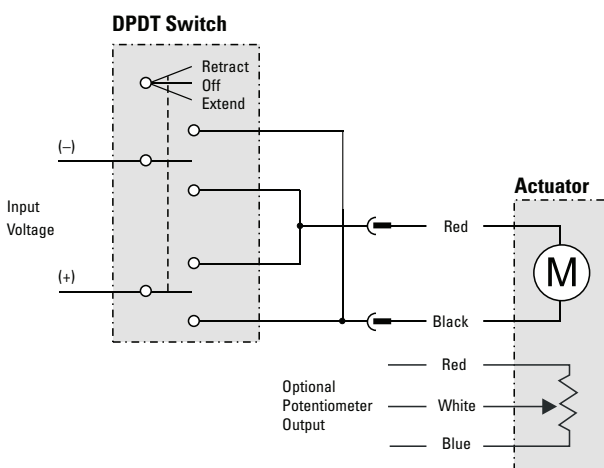
Connect the yellow lead to positive and black, white or blue* to negative to extend the actuator. Change polarity to retract the actuator. The potentiometer output has 0 ohm between white and red when the actuator is fully retracted. The actuator should be protected from overload conditions by a customer provided fuse in the circuit (6 A for 12 Vdc, 3 A for 24 Vdc and 2 A for 36 Vdc).

Electrak 10, LA14



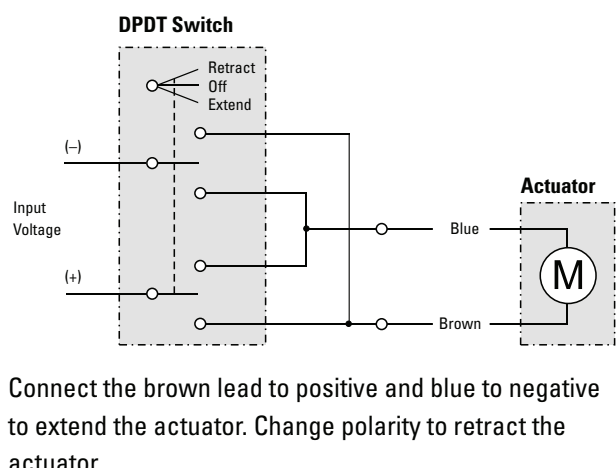
Connect the red lead to positive and black to negative to extend the actuator. Change polarity to retract the actuator. The potentiometer output has 0 ohm between grey and yellow when the actuator is fully extended.

Electrak 050



Connect the black lead to positive and red to negative to extend the actuator. Change polarity to retract the actuator. The potentiometer output has 0 ohm between white and red when the actuator is fully retracted.

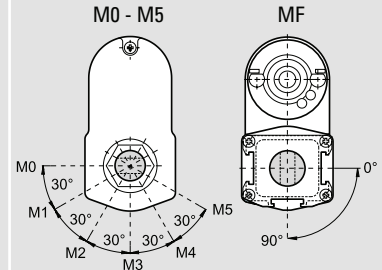
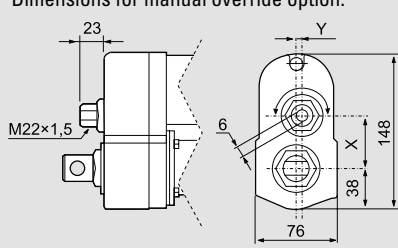
DMD



Connect the brown lead to positive and blue to negative to extend the actuator. Change polarity to retract the actuator.

Ordering Keys

Electrak DC-actuators

Electrak LA14																
1	2	3	4	5												
DA12 -	10A65M	15	M0	N												
<p>1. Input voltage DA12 - = 12 Vdc DA24 - = 24 Vdc DA36 - = 36 Vdc</p> <p>2. Dynamic load capacity, screw type and maximum speed 05A65M = 1100 N, acme, 54 mm/s 10A65M = 2250 N, acme, 30 mm/s 20A65M = 2250 N, acme, 15 mm/s 05B65M = 2250 N, ball, 61 mm/s 10B65M = 4500 N, ball, 30 mm/s 20B65M = 4500 N, ball, 15 mm/s 21B65M = 6800 N, ball, 15 mm/s</p>		<p>3. Stroke 05 = 50 mm 10 = 100 mm 15 = 150 mm 20 = 200 mm 25 = 250 mm 30 = 300 mm 35 = 350 mm 40 = 400 mm 45 = 450 mm 50 = 500 mm 55 = 550 mm 60 = 600 mm</p> <p>4. Rear / front adapter hole position¹ M0 = both adaptors at 0° (standard position) M1 = rear adaptor at 30°, front at 0° M2 = rear adaptor at 60°, front at 0° M3 = rear adaptor at 90°, front at 0° M4 = rear adaptor at 120°, front at 0° M5 = rear adaptor at 150°, front at 0° MF = rear and front adaptor at 90°</p> <p>5. Options N = no option NPO = potentiometer NHW = manual override²</p>		<p>¹ Definition of adapter hole positions.</p>  <p>² Dimensions for manual override option.</p>  <table border="1"> <thead> <tr> <th>Model</th> <th>X</th> <th>Y</th> </tr> </thead> <tbody> <tr> <td>05A(B)65M</td> <td>49,6</td> <td>0,0</td> </tr> <tr> <td>10A(B)65M</td> <td>43,3</td> <td>5,2</td> </tr> <tr> <td>20(21)A(B)65M</td> <td>38,9</td> <td>0,0</td> </tr> </tbody> </table>	Model	X	Y	05A(B)65M	49,6	0,0	10A(B)65M	43,3	5,2	20(21)A(B)65M	38,9	0,0
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05A(B)65M	49,6	0,0														
10A(B)65M	43,3	5,2														
20(21)A(B)65M	38,9	0,0														